

Please add new claims 34 and 35 as follows:

--34. The display device according to claim 22,
the first data line driving circuit having a first latch that takes in a digital signal and stores the digital signal, a second latch that takes in the digital signal from the first latch and stores the digital signal, and a D / A converter that converts the digital signal supplied from the second latch into an analog signal and drives the at least one of the plurality of data lines.--

--35. The display device according to claim 34,
the first latch, the second latch, the D / A converter, and the display matrix being formed on a substrate.--

REMARKS

Claims 22-35 are pending. By this Amendment, claims 22, 23, 24, 27 and 28 are amended and claims 34 and 35 are added. Reconsideration based on the above amendments and following remarks is respectfully requested.

The attached Appendix includes marked-up copies of each rewritten claim (37 C.F.R. §1.121(c)(1)(ii)).

I. Claims 25 and 26 Satisfy All Formal Requirements

The Office Action rejects claims 25 and 26 under 35 U.S.C. §1.112, second paragraph, because of an informality. Specifically, the Office Action asserts that there is insufficient antecedent basis for claim recitations. Applicant respectfully disagrees. Applicant asserts that there is sufficient antecedent basis for claim recitations "a first scan line driving circuit" and "a second scan line driving [circuit]." Withdrawal of the rejection under 35 U.S.C. §1.112, second paragraph, is respectfully requested.

II. The Claims Define Allowable Subject Matter

The Office Action rejects claims 22-24 and 28 under 35 U.S.C. §102(b) as unpatentable over U.S. Patent No. 5,040,878 to Fukuda et al. (hereinafter "Fukuda"); claim 27 under 35 U.S.C. §102(e) is unpatentable over European Patent Application No. EP 0

678848 to Maekawa (hereinafter "Maekawa"); claims 22, 27, 29, 30 and 33 under 35 U.S.C. §102(b) as unpatentable over U.S. Patent No. 4,816,816 to Usui (hereinafter "Usui"); and claims 31 and 32 under 35 U.S.C. §103(a) as unpatentable over Usui in view of Maekawa. These rejections are respectfully traversed.

Regarding claims 22-24 and 28, the Office Action asserts that Fukuda, at col. 3, lines 62-67, col. 4, lines 1-21 and 41-65, and in Figs. 1 and 2A, discloses a display device comprising a plurality of scan lines (Fig. 1, OG1...EGN), a plurality of data lines (Fig. 1, OS1...ESM), a first data line driving circuit (Fig. 1, 2A) connectable to at least one of the plurality of data lines through one end of the at least one of the data lines, and a second data line driving circuit (Fig. 1, 2B) connectable to the at least one of the plurality of data lines through the other end of the at least one of plurality of the data lines. Applicant respectfully disagrees with the Office Action's interpretation of Fukuda.

Contrary to the Office Action's assertion, Fukuda does not disclose these features. Instead, Fukuda, in Fig. 1, discloses a data driver for odd fields (2A) and a data driver for even fields (2B). Unlike the claimed invention, data drivers 2A and 2B are not connectable to the at least one of the plurality of data lines through one end **and** through the other end, respectively, of the at least one of the data lines, as claimed in claim 22.

Regarding claim 27, the Office Action asserts that the claimed invention is anticipated by Maekawa. Applicant respectfully disagrees. Maekawa does not disclose, teach or suggest a line sequential data driver, as claimed in claim 27.

Further, regarding claims 22, 27, 29, 30 and 33, the Office Action asserts that Usui, in Figs. 1 and 2, discloses the claimed invention. Applicant respectfully asserts that the Office Action's interpretation of the device disclosed in Usui is incorrect or misplaced. Nowhere in its specification and figures, Usui discloses, teaches or suggests the feature of "a first data line driving circuit connectable to at least one of the plurality of data lines through one end of the at least one of the data lines, and a second data line driving circuit connectable to the at least one of the plurality of data lines through the other end of the at least one of plurality of

the data lines, as claimed in independent claim 22. Further, Usui fails to disclose, teach or suggest the claimed feature of "at least one of the plurality of data lines connectable to the first data line driving circuit and the second data line driving circuit", as claimed in independent claim 27.

For at least reasons, it is respectfully submitted that independent claims 22, 27 and 28 are distinguishable over the applied art. Claims 23-26 and 29-34, which depend from claims 22, 27 and 28, are likewise distinguishable over the applied art for at least the reasons discussed above as well as for additional features they recite. Withdrawal of the rejections under 35 U.S.C. §102 and §103 is respectfully requested.

III. Conclusion

For at least the reasons discussed above, it is respectfully submitted that this application is in condition for allowance.

Should the Examiner believe that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicant's undersigned representative at the telephone number listed below.

Respectfully submitted,



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JAO:GPS/lbg

Attachment:
Appendix

Date: February 20, 2003

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DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461
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APPENDIX

Changes to Claims:

Claims 34 and 35 are added.

The following is a marked-up version of the amended claim(s):

22. (Amended) A display device, comprising:

a plurality of scan lines;

a plurality of data lines;

a display matrix comprised of a plurality of pixels at the intersections of the plurality of scan lines and the plurality of data lines;

a first data line driving circuit; and

a second data line driving circuit,

the first data line driving circuit connectable to at least one of the plurality of data lines through one end of the at least one of the data lines, and

the first data line driving circuit being a line sequential driver, and

the second data line driving circuit connectable to the at least one of the plurality of data lines through the other end of the at least one of plurality of the data lines.

23. (Amended) ~~A~~ The display device according to claim 22, comprising:

~~a plurality of scan lines;~~

~~a plurality of data lines;~~

~~a first data line driving circuit; and~~

~~a second data line driving circuit,~~

~~the first data line driving circuit connectable to at least one of the plurality of data lines;~~

~~_____the second data line driving circuit connectable to at least one of the plurality of data lines; and~~

~~_____the first data line driving circuit including at least one element that is not included in the second data line driving circuit.~~

24. (Amended) The display device according to claim ~~23~~22,
the first data line driving circuit and the second data line driving circuit having mutually different functions.

27. (Amended) A display substrate for use with a first data line driving circuit and a second data line driving circuit, comprising:

a plurality of scan lines; and

a plurality of data lines;

at least one of the plurality of data lines connectable to the first data line driving circuit and the second data line driving circuit; and

the first data line driving circuit being a line sequential driver.

28. (Amended) A display substrate for use with a first data line driving circuit and a second data line driving circuit, comprising:

a plurality of scan lines; and

a plurality of data lines;

at least one of the plurality of data lines connectable to the first data line driving circuit, ~~and~~

at least one of the plurality of data lines connectable to the second data line driving circuit; and

the first data line driving circuit being a line sequential driver.